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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,971	12/29/2005	Hiroyuki Nagao	4492-0145PUS1	3626

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BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER
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MORRISON, THOMAS A

ART UNIT	PAPER NUMBER
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3653

NOTIFICATION DATE	DELIVERY MODE
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01/02/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

# Office Action Summary

Application No.

10/562,971

Applicant(s)

NAGAO, HIROYUKI

Examiner

Thomas A. Morrison

Art Unit

3653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 12/29/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. Applicant's Preliminary Amendment of 12/29/2005 has been entered.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites the limitation "the image reading apparatus" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,725,209 (Takahashi et al.) in view of Japanese Publication No. 9-39467 (hereinafter JP'467).

Regarding claim 1, Figs. 1-6 of Takahashi et al. show a sheet feeder, comprising:  
a sheet accommodating section (207) configured to accommodate therein a stack of sheets (P);

a sheet pickup section (including 208) configured to contact the stack of sheets (P) and feed the sheets (P) toward a feed path; and

sheet separator (209) located downstream of the sheet pickup section (including 208), the sheet separator (209) including a feed roller (210) and a reverse roller (201),

wherein the reverse roller (201) includes a sponge member (including 203 and 204) having an outer periphery formed with a coating layer (205) having a surface smoothed to such an extent as to have a gloss. The Takahashi et al. patent discloses all of the limitations of claim 1, except for the coating layer (205) having a mean surface roughness of  $0.09 < \text{or} = R_a < \text{or} = 0.11$ .

JP'467 discloses that it is well known to provide an outer surface coating (2) onto a base member (1), in which the outer surface coating (2) has a surface roughness of  $0.09 < \text{or} = R_a < \text{or} = 0.11$ , for the purpose of reducing slip via addition of the outer coating. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the sponge member (including 203 and 204) of the reverse roller (201) of Takahashi et al. with an outer coating having a surface roughness of  $0.09 < \text{or} = R_a < \text{or} = 0.11$ , for the purpose of reducing slip of the reverse roller (201) of Takahashi et al., as taught by the English Abstract of JP'467.

Regarding claim 3, the English Abstract of JP'467 discloses that the coating layer comprises urethane rubber.

Regarding claim 5, Figs. 1-6 of Takahashi et al. show that the sheet pickup section (including 208) comprises a roller (208) member having a hollow portion therein.

The hollow portion of roller 208 is the hole in roller 208 into which the unnumbered shaft is installed.

Regarding claim 6, Figs. 1-6 of Takahashi et al. show an image reading apparatus (Fig. 6), comprising:

a sheet feeder as recited in claim 1 (see rejection of claim 1 above for the elements of the sheet feeder of claim 1); and

an image reading section (including 5 and 6) configured to read an image formed on each of the sheets fed by the sheet feeder. More specifically, the sheet feeder of claim 1 feeds a sheet from one of the lower cassettes (19A and 19B) in Fig. 6 up to a location where an image is formed on such sheet (near 9 in Fig. 6). This fed sheet is an "original" with an image formed thereon. Moreover, element 3 is configured to convey such original to the image reading section (including 5 and 6) to read such original. In other words, Fig. 6 shows an image reading section (including 5 and 6) configured to read an image formed on each of the sheets fed by the sheet feeder, as claimed.

Regarding claim 7, Figs. 1-6 of Takahashi et al. show an image forming apparatus (Fig. 6), comprising:

an image reading apparatus as recited in claim 6 (see rejection of claim 6 above for the elements of claim 6); and

an image forming section (including 7) configured to form an image based on image data read by the image reading apparatus.

Regarding claim 8, Figs. 1-6 of Takehashi et al. show an image forming apparatus (Fig. 6), comprising:

a sheet feeder as recited in claim 1 (see rejection of claim 1 above for the elements of claim 1);

an image reading section (including 5 and 6) configured to read an image formed on each of the sheets fed by the sheet feeder; and

an image forming section (including 7) configured to form an image based on image data read by the image reading apparatus (including 5 and 6).

4. Claims 1 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,725,209 (Takahashi et al.) in view of U.S. Patent No. 6,030,328 (Watanabe et al.)

Regarding claim 1, Figs. 1-6 of Takahashi et al. show a sheet feeder, comprising:

a sheet accommodating section (207) configured to accommodate therein a stack of sheets (P);

a sheet pickup section (208) configured to contact the stack of sheets (P) and feed the sheets (P) toward a feed path; and

sheet separator (209) located downstream of the sheet pickup section (208), the sheet separator (209) including a feed roller (210) and a reverse roller (201),

wherein the reverse roller (201) includes a sponge member (including 203 and 204) having an outer periphery formed with a coating layer (205) having a surface smoothed to such an extent as to have a gloss. The Takahashi et al. patent discloses that the coating layer (205) is a resin material, but Takahashi does not explicitly disclose that such coating layer (205) has a mean surface roughness of  $0.09 < \text{or} = R_a < \text{or} = 0.11$ .

The Watanabe et al. patent discloses that it is well known to provide a multi-layer roller (Figs. 1-2) with an outermost coating layer (3) having a mean surface roughness of  $0.09 < \text{Ra} \leq 0.11$ . See e.g., Figs. 1-2 and column 5, lines 60-65. Column 8, lines 50-54 of Watanabe et al. explain that such resin coating layer (3) offers superior surface smoothness, high surface hardness, and superior compression strength. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the reverse roller (201) of Takahashi et al. with an outermost coating layer, as taught by Watanabe et al. (i.e., a coating layer with a mean surface roughness of  $0.09 < \text{Ra} \leq 0.11$ ), for the purpose of forming a roller with superior surface smoothness, high surface hardness, and superior compression strength, as taught by Watanabe et al. Thus, all of the limitations of claim 1 are met by this combination of references.

Regarding claim 5, Figs. 1-6 of Takahashi et al. show that the sheet pickup section (including 208) comprises a roller (208) member having a hollow portion therein. The hollow portion of roller 208 is the hole in roller 208 into which the unnumbered shaft is installed.

Regarding claim 6, Figs. 1-6 of Takahashi et al. show an image reading apparatus (Fig. 6), comprising:

a sheet feeder as recited in claim 1 (see rejection of claim 1 above for the elements of the sheet feeder of claim 1); and

an image reading section (including 5 and 6) configured to read an image formed on each of the sheets fed by the sheet feeder. More specifically, the sheet feeder of

claim 1 feeds a sheet from one of the lower cassettes (19A and 19B) in Fig. 6 up to a location where an image is formed on such sheet (near 9 in Fig. 6). This fed sheet is an "original" with an image formed thereon. Moreover, element 3 is configured to convey such original to the image reading section (including 5 and 6) to read such original. In other words, Fig. 6 shows an image reading section (including 5 and 6) configured to read an image formed on each of the sheets fed by the sheet feeder, as claimed.

Regarding claim 7, Figs. 1-6 of Takahashi et al. show an image forming apparatus (Fig. 6), comprising:

- an image reading apparatus as recited in claim 6 (see rejection of claim 6 above for the elements of claim 6); and

- an image forming section (including 7) configured to form an image based on image data read by the image reading apparatus.

Regarding claim 8, Figs. 1-6 of Takehashi et al. show an image forming apparatus (Fig. 6), comprising:

- a sheet feeder as recited in claim 1 (see rejection of claim 1 above for the elements of claim 1);

- an image reading section (including 5 and 6) configured to read an image formed on each of the sheets fed by the sheet feeder; and

- an image forming section (including 7) configured to form an image based on image data read by the image reading apparatus (including 5 and 6).



5. Claims 1 and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,725,209 (Takahashi et al.) in view of U.S. Patent No. 5,722,026 (Goto et al.).

Regarding claim 1, Figs. 1-6 of Takahashi et al. show a sheet feeder, comprising:  
a sheet accommodating section (207) configured to accommodate therein a stack of sheets (P);

a sheet pickup section (208) configured to contact the stack of sheets (P) and feed the sheets (P) toward a feed path; and

sheet separator (209) located downstream of the sheet pickup section (208), the sheet separator (209) including a feed roller (210) and a reverse roller (201),

wherein the reverse roller (201) includes a sponge member (including 203 and 204) having an outer periphery formed with a coating layer (205) having a surface smoothed to such an extent as to have a gloss. The Takahashi et al. patent discloses that the coating layer (205) is a rubber material, but Takahashi does not explicitly disclose that such coating layer (205) has a mean surface roughness of  $0.09 < \text{or} = R_a < \text{or} = 0.11$ . See e.g., column 3, lines 32-37 of Takahashi et al.

The Goto et al. patent discloses that it is well known to provide a multi-layer roller (Fig. 2) with an outermost rubber coating layer that has a mean surface roughness of  $0.09 < \text{or} = R_a < \text{or} = 0.11$ . See e.g., Fig. 2 and column 7, line 57 to column 8, line 15. Column 8, lines 4-7 of Goto et al. explain that such rubber coating layer facilitates a higher operating speed of an image forming apparatus. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the reverse

roller (201) of Takahashi et al. with an outermost coating layer, as taught by Goto et al. (i.e., a coating layer with a mean surface roughness of  $0.09 < \text{or} = \text{Ra} < \text{or} = 0.11$ ), for the purpose of forming a roller that can operate at higher speeds, as taught by Goto et al. Thus, all of the limitations of claim 1 are met by this combination of references.

Regarding claim 5, Figs. 1-6 of Takahashi et al. show that the sheet pickup section (including 208) comprises a roller (208) member having a hollow portion therein. The hollow portion of roller 208 is the hole in roller 208 into which the unnumbered shaft is installed.

Regarding claim 6, Figs. 1-6 of Takahashi et al. show an image reading apparatus (Fig. 6), comprising:

a sheet feeder as recited in claim 1 (see rejection of claim 1 above for the elements of the sheet feeder of claim 1); and

an image reading section (including 5 and 6) configured to read an image formed on each of the sheets fed by the sheet feeder. More specifically, the sheet feeder of claim 1 feeds a sheet from one of the lower cassettes (19A and 19B) in Fig. 6 up to a location where an image is formed on such sheet (near 9 in Fig. 6). This fed sheet is an "original" with an image formed thereon. Moreover, element 3 is configured to convey such original to the image reading section (including 5 and 6) to read such original. In other words, Fig. 6 shows an image reading section (including 5 and 6) configured to read an image formed on each of the sheets fed by the sheet feeder, as claimed.

Regarding claim 7, Figs. 1-6 of Takahashi et al. show an image forming apparatus (Fig. 6), comprising:

an image reading apparatus as recited in claim 6 (see rejection of claim 6 above for the elements of claim 6); and

an image forming section (including 7) configured to form an image based on image data read by the image reading apparatus.

Regarding claim 8, Figs. 1-6 of Takehashi et al. show an image forming apparatus (Fig. 6), comprising:

a sheet feeder as recited in claim 1 (see rejection of claim 1 above for the elements of claim 1);

an image reading section (including 5 and 6) configured to read an image formed on each of the sheets fed by the sheet feeder; and

an image forming section (including 7) configured to form an image based on image data read by the image reading apparatus (including 5 and 6).

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,725,209 (Takahashi et al.) in view of JP'467 or, in the alternative, under 35 U.S.C. 103(a) as obvious over Takahashi et al. in view of JP'467, and further in view of U.S. Patent No. 4,287,649 (Kohler).

Regarding claim 2, Takahashi et al. in view of JP'467 discloses the coating layer that meets the limitation of claim 2. See MPEP 2113. More specifically, MPEP 2113 states that, "The patentability of a product does not depend on its method of production." Thus, the coating layer of Takahashi et al. in view of JP'467 meets the limitations of claim 2. Alternatively, it would be obvious to one of ordinary skill in the art to form the coating layer by dipping the sponge member (including 203 and 204) of

Takahashi et al. into a coating liquid, for the purpose of effectively controlling the thickness of such coating layer, as taught by Fig. 9 and column 3, lines 6-12 of the Kohler patent.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,725,209 (Takahashi et al.) in view of U.S. Patent No. 6,030,328 (Watanabe et al.) or, in the alternative, under 35 U.S.C. 103(a) as obvious over Takahashi et al. in view of Watanabe et al., and further in view of U.S. Patent No. 4,287,649 (Kohler).

Regarding claim 2, Takahashi et al. in view of Watanabe et al. discloses the coating layer that meets the limitation of claim 2. See MPEP 2113. More specifically, MPEP 2113 states that, "The patentability of a product does not depend on its method of production." Thus, the coating layer of Takahashi et al. in view of Watanabe et al. meets the limitations of claim 2. Alternatively, it would be obvious to one of ordinary skill in the art to form the coating layer by dipping the sponge member (including 203 and 204) of Takahashi et al. into a coating liquid, for the purpose of effectively controlling the thickness of such coating layer, as taught by Fig. 9 and column 3, lines 6-12 of the Kohler patent.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,725,209 (Takahashi et al.) in view of U.S. Patent No. 5,722,026 (Goto et al.) or, in the alternative, under 35 U.S.C. 103(a) as obvious over Takahashi et al. in view of Goto et al., and further in view of U.S. Patent No. 4,287,649 (Kohler).

Regarding claim 2, Takahashi et al. in view of Goto et al. discloses the coating layer that meets the limitation of claim 2. See MPEP 2113. More specifically, MPEP 2113 states that, "The patentability of a product does not depend on its method of production." Thus, the coating layer of Takahashi et al. in view of Goto et al. meets the limitations of claim 2. Alternatively, it would be obvious to one of ordinary skill in the art to form the coating layer by dipping the sponge member (including 203 and 204) of Takahashi et al. into a coating liquid, for the purpose of effectively controlling the thickness of such coating layer, as taught by Fig. 9 and column 3, lines 6-12 of the Kohler patent.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Morrison whose telephone number is (571) 272-7221. The examiner can normally be reached on M-F, 8am - 5pm.

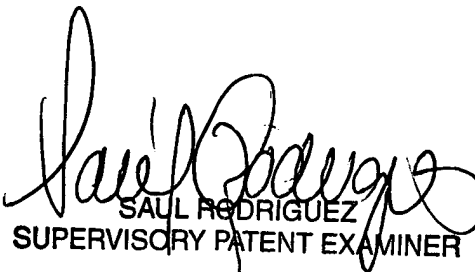
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on (571) 272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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12/24/2007

  
SAUL RODRIGUEZ  
SUPERVISORY PATENT EXAMINER